



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/607,212

06/26/2003

R. Enrique Viturro

D/A3248

5705

25453

7590

02/28/2005

PATENT DOCUMENTATION CENTER

XEROX CORPORATION

100 CLINTON AVE., SOUTH, XEROX SQUARE, 20TH FLOOR  
ROCHESTER, NY 14644

EXAMINER

BRASE, SANDRA L

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/607,212

Applicant(s)

VITURRO ET AL.

Examiner

Sandra L. Brase

Art Unit

2852



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12, 20 and 21 is/are allowed.
- 6) ☒ Claim(s) 13-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities.

On line 18 of page 4, "1" should be changed to "2".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13-16 are rejected under 35 U.S.C. 102(b) as being by anticipated Yoo et al. (US 6,289,184).
4. Yoo et al. (...184) disclose an electrophotographic color printing machine for producing color images, comprising: means for recording an image on an imaging member (col. 1, lines 22-44); a first developer unit (figure 1) for developing the image, the first developer unit including a sump for storing a quantity of developer material comprised of toner of a first color and carrier material, a member for transporting developer material from the sump, the sump including a viewing window, in communication with developer material, in the sump, an optical sensor, device for measuring reflected light off the viewing window and developer material, and means

Art Unit: 2852

for generating a signal indicative of the toner concentration in the sump, the optical sensor including a light source and a light detector, the light source emitting light at a first predetermined wavelength based upon the toner of the first color (col. 5, lines 61 – col. 6, line 55); and a second developer unit (figure 1) for developing the image, the second developer unit including a sump for storing a quantity of developer material comprised of toner of a second color and carrier material, a member for transporting developer material from the sump, the sump including a viewing window, in communication with developer material, in the sump, an optical sensor, device for measuring reflected light off the viewing window and developer material, and means for generating a signal indicative of the toner concentration in the sump, the optical sensor including a light source and a light detector, the light source emitting light at a second predetermined wavelength based upon the toner of the second color (col. 5, line 61 – col. 6, line 55). The first color and second color is selected from cyan, magenta and yellow. When the color is cyan, the predefined wavelength is 550-780 nm (col. 6, lines 45-55). When the color is yellow, the predetermined wavelength is 370-500 nm (col. 6, lines 45-55). When the color is magenta, the predetermined wavelength is (col. 6, lines 45-55). A method for determining toner concentration of a sample comprised of toner and developer, comprising: exposing the sample to light; the exposing includes emitting light at a predefined wavelength based upon the color of the toner (col. 6, lines 39-44); detecting the light reflected off the sample with an optical sensor (col. 5, line 63 – col. 6, line 3); and determining the toner concentration of the sample based upon the light reflected off the sample (col. 6, lines 24-28). The color of toner is selected from cyan, magenta and yellow. When the color is cyan, the predefined wavelength is 550-780 nm (col. 6, lines 45-55). When the color is yellow, the predetermined wavelength is 370-500 nm (col. 6,

Art Unit: 2852

lines 45-55). When the color is magenta, the predetermined wavelength is 460-610 nm (col. 6, lines 45-55).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. (US 6,289,184) in view of Fujita et al. (US 4,273,843).

8. Yoo et al. (...184) disclose the features mentioned previously, but do not disclose the wavelength the optical sensor used when the color is black. Fujita et al. (...843) disclose an optical detecting member and method that emits a light of a wavelength in the range of approximately 600 – 1000 nm for a black color developer (col. 5, lines 21-32; and figure 5). It would have been obvious to one of ordinary skill in the art at the time of the invention to have

Art Unit: 2852

the claimed wavelength when the color is black, as disclosed by Fujita et al. (...843), since such a wavelength value for a light emitted in an optical sensor device for black developer is well known in the art.

9. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoo et al. (US 6,289,184) in view of Fujii (US 5,229,821).

10. Yoo et al. (...184) disclose the features mentioned previously, and disclose a toner concentration controller including means for correlating measurements from the optical sensor to a toner concentration measurement (col. 6, lines 24- 28). However, Yoo et al. (...184) do not disclose optical sensor including an LED and a Si photodiode. Fujii (...821) discloses an optical developer sensor including a light source that comprises an LED and a light detector comprising a Si diode (col. 8, lines 3-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the optical sensor include an LED and a Si photodiode, as disclosed by Fujii (...821), since such components are well known in an optical sensor that senses developer in a developing device.

#### ***Allowable Subject Matter***

11. Claims 1-12, 20 and 21 are allowed.

#### ***Response to Arguments***

12. Applicant's arguments filed 11/22/04 have been fully considered but they are not persuasive.

Art Unit: 2852

13. Applicant argues that the references do not disclose detecting a dry developer material; however, the claims rejected above are not limited to a dry developer material.

***Final Rejection***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is 571-272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2852

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Sandra L. Brase". The signature is fluid and cursive, with the first name "Sandra" and last name "Brase" clearly distinguishable.

Sandra L. Brase  
Primary Examiner  
Art Unit 2852

February 18, 2005